the postero-external and a small part of the antero-external group was affected. In amputation of the thigh the alterations extended to the upper part of the segment between the ninth and eighth roots: All the group was altered up to the middle of the segment between the tenth and ninth roots. Above this sound cells gradually appeared antero-internally, until the degeneration was confined to the postero-external group.

From this it appears that there is segmental localization for the hind limbs in the cord of the frog. The cell groups for the different segments seem to be superimposed, and to have a sort of imbricated arrangement. The article is illustrated.

ALLEN (Trenton).

BRAIN

(Vol. 26, 1903, Spring, No. 1.)

1. The Autonomic Nervous System. J. N. LANGLEY.
2. The Nerve Cells in Thirty-three Cases of Insanity, with Special Refererence to Those of the Spinal Ganglia. JOHN TURNER.
3. Diagnostic Value of the Position of the Head in Cerebellar Disease. F. E. Batten.
4. Localization of the Respiratory and Cardiomotor Centre on the Frontal Cortex. J. W. LANGELAAN and D. H. BEYERMAN.
5. Pathology and Bacteriology of Landry's Paralysis. E. F. BUZZARD.
6. Case of Tumor of the Axis, illustrating the Functions of the Third Cervical Spinal Segment. W. THORBURN and JAMES GARDNER.

1. *The Autonomic Nervous System.*—Langley here considers the general plan of the efferent system of nerves which controls the unstriated muscle, the cardiac muscle, and the glandular tissues of mammals. He further points out how far the plan holds for other vertebrates, and he discusses the question of the existence of an afferent system of nerves corresponding to the efferent system. Under the general head of "Efferent Fibres" he says that they constitute an autonomic nervous system. These leave the central nervous system in four regions which are separated from one another by regions from which no efferent autonomic fibres pass. These four regions are: (1) In the mid-brain, with fibres passing to the iris and ciliary muscles; (2) in the bulb below the calamus, from which fibres pass by the seventh nerve and by the glossopharyngeal and vagus nerves. These supply the blood vessels and glands of the mouth, pharynx and nose, the walls of the esophagus, stomach, small and large intestines; (3) the third region is in the spinal cord, and gives origin to the sympathetic efferent fibres; (4) the sacral fibres giving off nerves which supply the walls of the anus, rectum, the walls of the bladder and the genito-urinary organs. With reference to afferent fibres he shows that: (1) The afferent fibres accompanying the efferent autonomic are in part somatic; (2) that afferent autonomic fibres are present in all spinal and most cranial nerves; and (3) that all the posterior root ganglia contain autonomic as well as somatic nerve cells.

2. *Nerve Cells in Insanity.*—This is a careful study made by modern histological methods of the cells of the nervous system in thirty-three cases of insanity. The study is too detailed to permit of adequate summarizing.

3. *The Head, in Cerebellar Disease.*—As a result of the author's investigations, he comes to the following summary: (1) A definite attitude of the head is not infrequently seen in cases of cerebellar disease in man, that position being with the ear approximated to the shoulder on the side opposite to the lesion, and with the face turned up to the side of the lesion; (2) this position of the head, so far as the approximation of

the ear to the shoulder is concerned, is the reverse, while the position of the face is the same as that seen after experimental ablation of one lobe of the cerebellum. To answer the second portion of the question, viz., can the sign be used as a symptom of diagnostic value? in the bare affirmation might lead to error, for the relative value of this symptom in comparison with the other symptoms of a cerebellar lesion, is a question which needs most careful consideration in each individual case. It is probably a symptom of less importance than in coordination or weakness; (3) the fact that the position is sometimes present in cases in which there is no gross lesion of the cerebellum is a further reason for not attaching too great importance to the position assumed by the head. In conclusion, it may be said that as an additional and confirmatory sign of cerebellar tumor, the position assumed by the head is of value, but too much importance should not be attached to its presence alone, or when opposed to symptoms which have been shown to possess greater diagnostic value.

4. *Respiratory Centre and Heart Centre in the Frontal Lobe.* (See abstract from *Psychiatrische Bladen* elsewhere.)

5. *Landry's Paralysis.*—The author makes a complete study of the pathological and bacteriological features in a case of Landry's paralysis, the anatomical features of which cannot be adequately summarized. He was able to isolate a micrococcus from the blood, which micrococcus was found in large numbers in the external part of a spinal dura of the same patient. The injection of the cultivated organism into a rabbit produced a rapidly spreading palsy, and the changes in the nervous system in both the patient and the rabbit were of the kind produced by toxins.

6. *Tumor of the Axis.*—A report in detail of a sarcoma in the body of the axis growing very slowly over a period of four years, which compressed the cord on the left side between the second and third cervical vertebræ. The motor symptoms consisted in paralysis, with marked wasting of the left sterno-mastoid and trapezius and an affection of the left eye, due to destruction of the left motor nuclei. The left phrenic nerve was completely paralyzed. The full details of the areas of anesthesia should be consulted in the original. JELLIFFE.

PSYCHOLOGISCHE EN NEUROLOGISCHE BLADEN

(March-April, 1903.)

1. Pathological-Anatomical Researches about the Gyrus Hippocampi, Cornu Ammonis and Gyrus Dentatus, principally in Insania Epileptica. J. P. HULST.
2. A Medico-Legal Examination. A. COUVEE and C. WINKLER.

1. *Pathological-Anatomical Rcsearches about the Gyrus Hippocampi, Cornu Ammonis and Gyrus Dentatus.*—The author gives a report about the extensive literature of the subject. Bouchet et Gazauvieilh published in 1825 some cases, in which was found induration of the gyrus hippocampi together with hyperemia. They found, however, similar changes in other than in epileptical psychoses. Since that time a great many other (Bergman, Hoffmann, Meinert, Sommer, Pfleger and Worcester) published cases with alleged abnormalities in the pyramidal cells of the cornu ammonis. Some authors found similar changes even in 50 per cent. of the epileptics. Lastly have Robertson and Binswanger examined a number of cases and did not come to a positive result. Equally Gowers did not attribute any great value to the changes of the hippocampus in epilepsy. The author examined in 17 cases very carefully the different layers of ganglion cells of these structures. Very limited descriptions of the cases which the author gives do not sufficiently warrant the diagnosis, it appears. The weight of the brains amounted from 915 to 1505; the heaviest brains belonged to epileptics. Careful countings were made about the